AMENDMENTS TO THE CLAIMS

1	1. (Currently amended) A DSL modem comprising:
2	a bandwidth allocator adapted to dynamically adjust a bandwidth allocation based
3	on voice channel demand, the bandwidth allocation defining a bandwidth
4	for each of a plurality of one or more voice channels and unchannelized
5	data; and
6	a formatter coupled to the bandwidth allocator, the formatter adapted to combine
7	the voice channels and unchannelized data onto a digital subscriber line
8	according to the bandwidth allocation, thereby creating a transmission
9	signal.
1	2. (Original) The DSL modem of claim 1, further comprising:
2	an off-hook detector coupled to the bandwidth allocator, the off-hook detector
3	adapted to couple to one or more local customer premises voice lines for
4	measuring voice channel demand thereon.
1	3. (Original) The DSL modem of claim 2, further comprising:
2	a next-format storage coupled to the off-hook detector for storing a next
3	bandwidth allocation, the next bandwidth allocation based on a detected
4	change in voice channel demand.
1	4. (Original) The DSL modem of claim 1, wherein the transmission signal
2	includes next bandwidth allocation data, the next bandwidth allocation data defining an
3	anticipated bandwidth for the voice channels and data.
1	5. (Original) The DSL modem of claim 1, wherein the bandwidth for each voice
2	channel is associated with a timeslot in the transmission signal, the remaining transmission
3	signal bandwidth available for data.
1	6. (Original) The DSL modem of claim 5, wherein the bandwidth allocator is
2	adapted to adjust the bandwidth allocation at integer multiples of the periodicity of the
3	timeslots.

ı	7. (Original) The DSL modern of claim 1, wherein the formatter is adapted to
2	format the transmission signal into a series of superframes, each superframe including a
3	plurality of network frames, each network frame including a plurality of low-level frames,
1	each low-level frame including a plurality of timeslots, the timeslots containing a voice call
5	or data.
1	8. (Original) The DSL modem of claim 7, wherein the bandwidth allocator is
2	adapted to adjust the bandwidth allocation at the frequency of the superframe.
1	9. (Original) The DSL modem of claim 7, wherein the network frames are
2	synchronized to a telephone-network timing reference.
1	10. (Original) The DSL modem of claim 1, wherein at least one voice channel
2	includes voice data selected from the group consisting of: voice data, facsimile data, analog
3	modem data, and digital service data.
1	11. (Original) The DSL modem of claim 1, wherein the DSL modem is a central
2	office modem.
!	12. (Currently amended) A DSL modem comprising:
2	a DSL connection for transmitting information over a digital subscriber line;
3	a plurality of voice lines for carrying channelized data; and
Į.	a module coupled to the DSL connection and the plurality of voice lines for
5	transmitting channelized data and unchannelized data over the digital
j .	subscriber line, the module adapted to dynamically allocate bandwidth for
7	transmitting the channelized data based on availability of channelized
3	data, and to dynamically reallocate unused channelized data bandwidth for
)	transmitting the unchannelized data.
!	13. (Currently amended) A method of dynamically allocating bandwidth in a
!	digital subscriber line among channelized data from one or more local phone lines and

App. No. 10/032,127 - 4 - 21676/06533/SF/5113612.1

establishing a connection to a digital subscriber line;

unchannelized data, the method comprising:

3

5	allocating a portion of the bandwidth for each of a plurality of the local phone
6	lines in use, the remaining bandwidth available for unchannelized data;
7	transmitting the channelized and unchannelized data over the digital subscriber
8	line in their respective allocated bandwidths;
9	detecting a change in phone line usage; and
10	reallocating the bandwidths among the local phone lines and unchannelized data
11	based on the detected change.
1	(Original) The method of claim 13, further comprising:
2	transmitting a bandwidth allocation over the digital subscriber line, the bandwidth
3	allocation defining bandwidths corresponding to the channelized and
4	unchannelized data.
1	15. (Original) The method of claim 13, wherein the bandwidths allocated for each
2	of the local phone lines in use are substantially equal and are capable of carrying a voice call.
1	16. (Currently amended) A method of transmitting voice calls and digital data
2	over a digital subscriber line, the method comprising:
3	transmitting digital data and voice data over the digital subscriber line in a
4	bandwidth;
5	detecting a new voice call;
6	responsive to the new voice call, dynamically reallocating a first portion of the
7	bandwidth to the new voice call and a second portion of the bandwidth to
8	the digital data; and
9	combining the voice [[call]] calls in the first portion of the bandwidth and the
10	digital data in the second portion of the bandwidth for transmitting over
11	the digital subscriber line.
1	17. (Original) The method of claim 16, wherein the first portion of the bandwidth
2	is outside POTS band frequencies.

App. No. 10/032,127 - 5 - 21676/06533/SF/5113612.1

18. (Original) The method of claim 16, wherein the voice call includes data
selected from the group consisting of: voice data, facsimile data, analog modem data, and
digital service data.
19. (Original) The method of claim 16, further comprising:
responsive to the voice call's ending, reallocating the first portion of the
bandwidth to the digital data.
20. (Original) A method of dynamically allocating bandwidth among voice and
data traffic, the bandwidth comprising a plurality of timeslots, the method comprising:
allocating timeslots among the voice and data traffic;
composing a first superframe, the first superframe containing a plurality of
network frames, each network frame containing a plurality of low-level
frames, each low-level frame containing the voice and data traffic in their
allocated timeslots;
sending the first superframe over a digital subscriber line;
in response to detecting a change in the voice traffic demand, reallocating the
timeslots among the voice and data traffic;
composing a second superframe, the second superframe containing a plurality of
network frames, each network frame containing a plurality of low-level
frames, each low-level frame containing the voice and data traffic in their
reallocated timeslots; and
sending the second superframe over the digital subscriber line.
21. (Original) The method of claim 20, wherein composing the first superframe
includes synchronizing the network frames to a telephone-network timing reference.
22. (Original) The method of claim 20, further comprising:
sending a next allocation of the timeslots over the digital subscriber line to the
remote modem, the next allocation being encoded within the current

superframe.